

IN THE CLAIMS:

Listing of claims:

1. (currently amended) A method for forming an air bearing surface on a slider, comprising: [[,]]
providing a silicon slider body comprising single crystal silicon;
forming at least one trench in a surface of the silicon slider body; and
forming a structure selected from the group consisting of a carbide structure and a nitride structure in the at least one trench.
2. (previously presented) A method as in claim 1, wherein the structure comprises the carbide structure.
3. (original) A method as in claim 1, further comprising forming at least one of a read element and a write element on the surface after forming the structure.
4. (currently amended) A method as in claim 1, further comprising forming a carbon layer over at least a portion of the silicon slider body on the surface of the slider.
5. (currently amended) A method as in claim 1, further comprising forming the trench by etching a portion of the silicon slider body.
6. (currently amended) A method as in claim 2, further comprising forming a layer between the silicon slider body and the carbide structure.
7. (original) A method as in claim 6, wherein the layer comprises a material comprising titanium.

8. (original) A method as in claim 6, wherein the layer comprises a material that improves adhesion between the carbide and the silicon.

9. (currently amended) A method for forming an air bearing surface on a slider,
comprising: as in claim 2,

providing a silicon slider body;

forming at least one trench in a surface of the silicon slider body; and

forming a carbide structure in the at least one trench;

wherein the carbide structure is formed by a process comprising:

filling the trench in the silicon slider body with a metal carbide and anhydrous metal chloride material;

heating the silicon slider body so that the metal carbide and anhydrous metal chloride material becomes a melt;

after the heating the silicon slider body, cooling the silicon slider body to produce a product material from the melt; and

removing chloride material formed from the product material.

10. (currently amended) A method as in claim 9, further comprising, after the heating the silicon slider body so that the metal carbide and anhydrous metal chloride material becomes a melt, annealing the silicon slider body for a predetermined time period.

11. (previously presented) A method as in claim 9, wherein the removing chloride material comprises rinsing the surface of the material with at least one liquid selected from the group consisting of water and methanol to remove the chloride material.

12. (original) A method as in claim 9, further comprising planarizing the carbide using a method selected from the group consisting of etching and polishing.

13. (original) A method as in claim 12, further comprising etching the silicon slider body so that the carbide extends outward from the etched silicon slider body.

14. (currently amended) A method as in claim 9, wherein the heating the silicon slider body comprises heating the metal carbide and anhydrous metal chloride material to a temperature of at least 450°C.

15. (previously presented) A method as in claim 1, wherein the structure comprises the nitride structure.

16-29. (canceled)

30. (withdrawn/currently amended) A method as in claim 1, further comprising for forming a surface on a slider, comprising,
providing a silicon slider body;
forming at least one trench in a surface of the silicon body; and
forming a structure selected from the group consisting of a carbide structure and a nitride structure in the at least one trench and extending forming the structure to extend to a position above the surface of the silicon slider body adjacent to the trench.

31. (withdrawn) A method as in claim 30, wherein the structure comprises a carbide structure.

32. (withdrawn) A method as in claim 30, wherein the structure comprises a nitride structure.

33. (withdrawn/currently amended) A method as in claim 30, further comprising forming a read/write head on the silicon slider body after forming the structure.

34. (withdrawn) A method as in claim 31, wherein the carbide structure is formed by a process comprising:

positioning a metal carbide and an anhydrous metal chloride in the trench;

forming a melt in the trench by heating the metal carbide and the anhydrous metal chloride;

after the heating, cooling the melt to yield a cooled product material; and
removing chloride material from the cooled product material.

35. (withdrawn/currently amended) A method as in claim 34, wherein the removing chloride material comprises rinsing the surface of the cooled product material with at least one liquid selected from the group consisting of water and methanol.

36. (withdrawn) A method as in claim 34, wherein the heating comprises heating the metal carbide and anhydrous metal chloride material to a temperature of at least 450°C.

37. (withdrawn) A method as in claim 34, further comprising forming a layer comprising titanium in the trench prior to the positioning a metal carbide and an anhydrous metal chloride in the trench.

38. (withdrawn/currently amended) A method as in claim 9, further comprising forming a layer comprising titanium in the trench prior to the filling the trench in the silicon slider body with a metal carbide and anhydrous metal chloride material.

39-42. (canceled)